CLAIMS

1. Hollow-chamber profile made of metal, especially for heat exchangers, consisting of an extruded base profile (10) with two parallel wide sides (16, 17) and two narrow sides (18, 19), where at least one channel (11) extends in the longitudinal direction of the base profile (10) through the interior space (23) in the base profile (10), characterized in that the narrow sides (18, 19) are shaped in the direction perpendicular to the longitudinal dimension of the base profile (10), where left-oriented profilings (21) transverse to the longitudinal dimension and right-oriented profilings (22) transverse to the longitudinal dimension alternate with each other along the two narrow sides (18, 19), and where the width (B) of the base profile (10) is the same over the entire length of the base profile (10).

2. Hollow-chamber profile according to Claim 1, characterized in that webs (13), which extend from wide side (16) to wide side (17) and form several channels (11), are located in the interior space (23) of the base profile (10), and in that these webs(13) have profilings (21, 22) perpendicular to the longitudinal dimension of the base profile (10), where the

distance (A) between two adjacent webs (13), the distance (C) between the narrow side (18) and the first web (13'), and the distance (D) between the narrow side (19) and the last web (13'') are the same over the entire length of the base profile (10).

3. Hollow-chamber profile according to Claim 1 or Claim 2, characterized in that the profilings (21, 22) of the narrow sides (18, 19) and of the webs (13) form a wave-like pattern extending down the length of the base profile (10), such that the base profile (10) has the same free flow cross section at all points along its length.

4. Hollow-chamber profile according to Claim 3, characterized in that the wave-like patterns formed by the narrow sides (18, 19) and the webs (13) have the same wavelength over the entire length of the base profile (10).

5. Hollow-chamber profile of metal, especially for heat exchangers, consisting of an extruded base profile (10) in the form of a round tube or a coaxial tube, where at least one channel (11) extends in the longitudinal direction of the base profile (10) through the interior space (23) in the base profile (10), characterized in that opposite sides of the base profile

(10) are shaped in the direction perpendicular to the longitudinal dimension of the base profile (10), where left-oriented profilings (21) transverse to the longitudinal dimension and right-oriented profilings (22) transverse to the longitudinal dimension alternate with each other along the sides, and where the width (B) of the base profile (10) is the same at all points along the length of the base profile (10).

6. Hollow-chamber profile according to one of Claims 1-5, characterized in that the base profile (10) is manufactured of aluminum or an aluminum alloy.

7. Hollow-chamber profile according to one of Claims 1-6, characterized in that it is used as a cooler for gas or liquid streams, especially as a gas cooler or as a charge cooler for motor vehicles.

8. Process for the production of a hollow-chamber profile made of metal, especially for a heat exchanger,

-- where a hollow profile strand (20) is produced by extrusion in the form of a round tube or a coaxial tube, or a flat profiled strand (20) is produced with two parallel wide sides (16, 17) and curved or flat narrow sides (18, 19), at least one channel (11) extending through the interior space (23)

of the base profile (10);

--- where this hollow profile strand (20) is shaped; and

-- where the profile strand is then cut to obtain the base profile (10) of the desired length,

characterized in that the hot, hollow profile strand (20) emerging from the shaping zone of the extrusion die (33) is caused to oscillate in a defined manner and/or is shaped by an oscillating shaping tool (30).

9. Process according to Claim 8, characterized in that a hollow profile strand of aluminum or an aluminum alloy is extruded.

10. Process according to Claim 8 or Claim 9, characterized in that a shaping tool (30), which oscillates in a direction perpendicular to the exit direction (36) of the profile strand (20), produces profilings (21, 22) of the same type simultaneously on the narrow sides (18, 19) and on webs (13), if present, of the hot hollow profile strand (20) as soon as it emerges from the shaping zone.

11. Process according to Claim 10, characterized in that the narrow sides (18, 19) and the webs (13) are given similar sets of corrugations in the longitudinal direction of the base

profile (10).

12. Process according to Claim 8 or Claim 9, characterized in that the shaping tool (30), which moves in at least two planes of oscillation, produces circular corrugations of the profile wall (12) in the hot hollow profile strand (20) as soon as it emerges from the shaping zone.

13. Process according to one of Claims 8-11, characterized in that, to obtain corrugations with the desired wavelength (l), the oscillation frequency (f) of the shaping tool (30) is adapted to the exit speed (v) of the strand.

14. Process according to one of Claims 8-13, characterized in that the profile strand is produced at extrusion speeds (v) of 15-200 m/minute, and preferably of 60-150 m/minute.

15. Process according to one of Claims 8-14, characterized in that the wavelengths of the corrugations of the profile strand (20) are on the order of 1-100 mm.

16. Process according to one of Claims 1-15, characterized in that the shaping tool (30) acts on the hot, hollow profile strand (20) as soon as it emerges from the extrusion die (33), so that the deflection forces which occur during the oscillating movement of the shaping tool act all the way back into the

extrusion die (33).

17. Process according to Claim 16, characterized in that the shaping tool (30) is located in a recess in the cross-brace of the extruder.

18. Process according to one of Claims 8-15, characterized in that, as soon as the hollow profile strand (20) emerges from the extruder, it is gripped by a guide (37) located a certain distance away from the extrusion die (33) and conducted to a shaping tool(30), during which the temperature of the hollow profile strand (20) decreases from the temperature at which it left the extrusion die (33) to a shaping temperature inside the shaping tool (30) of at least 250°C, and preferably of greater than 400°C.

19. Process according to one of Claims 8-15, characterized in that, as soon as the hollow profile strand (20) emerges from the extruder, it is gripped by a guide (37) located a certain distance away from the extrusion die (33) and is heated to a shaping temperature of at least 250°C, and preferably of greater than 400°C, before it is directed to a shaping tool (30).

20. Process according to one of Claims 8-19, characterized in that the oscillating movement of the shaping tool (30) is produced by electromagnetic forces.

21. Process according to one of Claims 8-19, characterized in that the shaping tool (30) is subjected cyclically to the force of a fluid medium to produce the shaping of the hollow profile strand (20).

22. Process according to Claim 8, characterized in that the extrusion die (33) itself acts as an oscillating shaping tool (30).